

How we became net friends, and what we learned from it

Mikael Jakobsson
Department of Informatics
Umeå University
901 87 Umeå
Sweden

mjson@informatik.umu.se
<http://www.informatik.umu.se/~mjson/>

Victoria L. Popdan
Johns Hopkins University
Baltimore, MD, USA

vicki8@ssfs.org
<http://www.ssfs.org/~vicki8/whome.html>

Abstract

This paper is an auto ethnographic study of the development of a net friendship. One of the effects of the spreading use of Internet is that more and more people form relations between them without meeting face-to-face. Our goal has been to try to capture some of the specific characteristics of the development of such a friendship, with an emphasis on the interaction in virtual worlds. Much of the discussions in the paper are at some level connected to the question of what a net identity is and how it is constructed. Our main points are: Some personal traits are emphasized in virtual contexts and some are de-emphasized. But on the whole, the way a person is perceived is very different compared to meeting FtF. By restricting interaction to the exchange of ideas, without the burden of exposing ones physical characteristics opens for a more direct style of interaction. The virtual body is of importance for the perceived engagement of the virtual world experience and as a conveyor of emotions. It even mentally takes the place of the physical body. The way the technology is designed affects the form of the social interaction, but often in ways not predicted by the designer. The technology worked as a shield, but not between Vicki and Mike, but between Mike and his girlfriend. When we import props from the real world such as bodies and object, we also import meaning attached to them.

Our conclusions are that net friendship is different from friendships in a physical setting in many ways. But there is nothing that indicates that the net friendship should be less real or important than its physical counterpart. This is perhaps best taken both as a promise and a warning. People who hope to use the net for real meaningful social interaction may be able to find what they are looking for, while people who wish to use the net for detached and non-committal adventures that they think will bear no consequences on their off-line existence should take this paper as a warning.

1 Introduction

The Internet has given rise to new forms of communication and interaction between people. E-mail, newsgroups, chat, instant messaging, MUDs, and virtual worlds, all work as mediators of interaction between people. One interesting aspect of these emerging forms of interaction is their challenge to our traditional concept of identity. The majority of constituents contributing to what we normally consider or term our 'identity' are directly related to our physical being. Gray hair often suggests advanced age. Deep, sonorous, heavy tones often indicate a masculine voice. Sweet, floral scented perfume usually denotes a woman. Soft, smooth skin will often infer youth. We regard our surroundings, each other, and ourselves, in terms of our perceptions – what we can sense, glean, and compile to form an opinion based on the sensory input received.

Relations online force us to develop an entirely new means of perceiving other people, assessing them, evaluating them in terms of something other than our conventional method – what we can surmise from their physical existence. Online relations also provide us with an opportunity to create new images for ourselves, within the constraints of the medium. In a graphical online environment, for instance, we can choose how we wish to present ourselves visually through our choice of avatar¹. This way of consciously designing how we present or express the self is by no means new. According to Goffman (1959) we have always carefully chosen how to present ourselves to other people. We play different roles in different settings. What is new is that the roles of our online identities are enacted without the use of our physical bodies.

How, then, is this new freedom utilized by people interacting on the net? It is difficult to procure an accurate picture of what net-life is actually like through a survey of the research conducted within and reported about the medium, due to conflicting depictions of online culture. Some describe net-life as advanced role-playing. A world where people are enacting fantasies far from their ordinary personality, and where multiple identities and gender swapping is the norm (e.g. Turkle, 1995 and Donath, 1996). But a more recent study (Schiano & White, 1998) made on a large number of participants in LambdaMOO, which is exactly the kind of place where the activities described above are supposed to be dominant, reports that people generally prefer to 'be themselves' rather than play roles, and that almost everyone considers at least their main character to portray themselves. They do not, however, deny that there are discrepancies between their ordinary identity and who they are online. Our understanding is that the online identity is, in fact, a role, but we actually play ourselves.

In this paper we will investigate the emergence of a net friendship – the process of two persons getting to know each other and building a relationship via venues provided by the Internet, without ever physically meeting. More specifically we will study the friendship between the two authors of this paper. Our aim is to use this case to shed some light on the process of presenting and perceiving a net identity.

We recognize the difficulty in making general statements based on our study. Our aim is to describe how friendship *can* evolve over the net and make some observations that we believe to be common for similar situations. We have a rather unique collection of empirical data since we have saved almost all e-mail messages and chat logs, as well as other communicated material such as photographs, images, sound files, documents etc. The material is rather extensive; we have, for instance, exchanged almost 400 e-mails during the period in which we have known each other. Rather than attempting to grasp the entire body of material and struggling to educe the essence from it, our endeavor instead is to extract the concepts which struck us as most interesting, occasionally using the material to check the accuracy of our recollections.

2 Deep Cyberspace

We first met during a course called *Deep Cyberspace '98* led by Dr. Michael Heim, which took place online and included participants from Europe, Australia and the United States. The course lectures were posted on Dr. Heim's Web site and we used a web based

¹ An avatar is in this context the graphical representation of a body in a virtual environment.

Identities in Action!

discussion list where the participants could post their responses and other contributions. Most of the time was, however, spent together in a three-dimensional (3D) virtual world system called *Active Worlds* (AW). In this system there are over a hundred different worlds to choose from. Besides conducting excursions to different worlds we spent most of the time in *ACCD World*, a world designed and created by Dr. Heim and his builders. In each world one can choose from a varied set of avatars. Using an avatar allows one the ability to both navigate and interact within the 3D environment in an embodied manner. Interaction with other participants is conducted by typing messages on the keyboard or gesturing with your avatar, thus virtually interacting in a physical sense with other people.



Figure 1. Class of '98 in *ACCD World*.

We knew next to nothing about each other when we started interacting in AW, but it didn't take long before we found ourselves interacting more with each other than with any of the other participants. Our online identities had much in common. We both used a similar language full of abbreviations, acronyms, emoticons, and special expressions typical of seasoned online veterans, and we quickly caught on to how to use the client software to navigate and perform different actions within the world. We both also typed relatively fast. These characteristics distinguished us from most of the other DC'98 participants, who were treading these mysterious surroundings with a slightly greater degree of caution. Another interesting coincidence – we both chose avatars that not only resembled the characteristics of our own identities, both on- and off-line, but also bore a resemblance to each other.

These common characteristics, and subsequent coincidental occurrences, demonstrate how personal traits fitting the characteristics of the medium are emphasized, while other abilities, or disabilities, are hidden. This was most clearly demonstrated in the case of comfortably numb² and Prospero³. Comfortably numb behaved like a fish in water in this environment, and with good reason. Vicki was practically brought up with computers, and being a writer affords her a certain proficiency with the English language. To top it off she also has good computer equipment readily available in her home.

² This is the nickname Vicki uses for her avatar in AW. Mike goes under the name of mjson.

³ Since we consider an online identity to be a real identity we do not use the actual nicknames of other people to protect their anonymity. Prospero is a pseudonym we have given one of the other course participants. The other avatar names in the paper has also been altered.

Prospero, on the other hand, always seemed to have some kind of problem. To Mike he resembled a fish on dry land, twitching and turning in a constant struggle to keep up with the group, and sometimes even for his existence. Every now and then his connection was broken or his computer crashed which made him disappear until he could connect again. Crashing out of the world happens to almost everybody sometime, but to him it seemed more frequent. In the ordinary world the man behind the net identity Prospero has a Ph.D. in comparative literature and teaches Swedish at a college university in Sweden. The computer he used did not have a sound card, so he was in practice deaf to the ambient sounds and sound effects in the worlds that all the other participants could hear. On top of this, he lacked the thorough experience with computers and net-life that Vicki has, and could not use his native language.

In the ordinary world the roles are to some extent reversed between Vicki and the man behind Prospero. She is a 25-year-old graduate student who is a quadriplegic as the result of a car accident. This means that she cannot move her arms or her legs. She controls her computer by typing using a mouth stick or talking to a speech recognition system, and she controls the mouse pointer by a head-mounted device. To Vicki it is a relief to be able to meet people online without having to deal with people's often awkward reactions to her quadriplegia and although she is still just as stuck in her wheel chair whether she is on- or off-line, the way that the net keeps her from constantly being singled out as differing from the norm, makes her net-life an appreciable contrast to her ordinary life. To Mike it was very surprising to learn about Vicki's quadriplegia after having spent time with her online every week for a three-month period without noticing anything different about her than the agility of her virtual body. The fact is – and whether or not it is an advantage or a hindrance remains to be seen, but can for now only be regarded in terms of its situation – the medium leaves people rather clueless to much of the physical traits of the other participants. For instance, Mike used to think of Vicki as “little Vicki”, which she found tremendously amusing when Mike referred to her as such, considering she is about 5'11” tall.

It is difficult to say what may have happened if the course had instead been held under conventional conditions – face-to-face (FtF) meetings in an ordinary classroom. The fact that Vicki is a student and Mike a teacher, the age and gender differences, or her quadriplegia, are all factors which perhaps could have made it less likely that we would connect in the way we did, but were transcended by the allowances of the medium. We can not really tell if we would “hit it off,” so to speak, in person since we have never met FtF in the physical realm, but we can say with certainty that our net identities are very compatible and even now that we know about these differences between us it seems that the net-based interaction has an inherent ability to de-emphasize them. Mike has noted the same thing in contacts with his students where he has had a chance to compare their behavior towards him in the student cafeteria and in a virtual coffee room. The attitude towards him in the virtual setting is typically so relaxed that it is actually hard to recognize any clear signs that they regard him as anything other than one of the group.

We attribute this at least partly to the fact that an authority figure needs what Goffman (1959) calls his “sign equipment” in order to maintain his position. The signification of authority would, in the case of the students, to a large extent rest in the environment. The design of a lecture hall affords obedience to the lecturer. This authority is then carried on as long the group remains in the same environment, but is lost if the environment is changed to one that does not carry the same signals. Much of a person's sign equipment is

made up of appearance and behavior; since all that is hidden on the net it has an inherent tendency to decrease status differences from the ordinary world. But it is important to remember that the virtual worlds have social hierarchies of their own, and although the “rules” differ, there is still a ladder there to climb. This, in turn, predicts that people will take whatever props available in a virtual world and assign symbolic values to them in order to be able to use them as sign equipment. For a further discussion on this see Jakobsson (1999).

3 Getting to know each other

At the end of the course we had an informal social meeting in a virtual world designed and maintained by Mike called *The Virtual MIT House*. The two of us stayed and talked long after the others had left. We talked about very serious and personal issues, and felt comfortable in doing so despite the fact that we knew very little about each other. We attribute this to the way the avatar works as a mask that shields the person behind it and in this way tends to make the person more open. To us the saying that “the mask does not hide, it reveals” captures this phenomenon very well.

It is important to note that the mask in this case was not connected to anonymity or even pseudonymity. Online synchronous communication, or what is now commonly referred to as ‘chatting’, is often thought of as being anonymous, but in our case there was no sign of this behavior. We wanted to get to know each other and we soon found out that even though we might very possibly never meet FtF we wanted to know what the other person looked like, sounded like, and so on. But we still enjoyed the relief of avoiding FtF contact during the conversation. In this respect, the medium shares a feature of the Catholic confession booth, the psychoanalyst’s couch, or even the telephone. We believe this to be a major influence on the conduct in virtual worlds. During the two years that Mike has been conducting participative studies in virtual worlds, the mask has been a constantly reoccurring theme, and when people are asked if they “are themselves on the net” they sometimes even reply that they are “more themselves on the net than in the ordinary world”.

Added to this is the effect of not having to be judged by one’s physical appearance. In FtF interaction we always let the physical appearance of a person influence our first impression of that person. One could say that we get to know people from the outside, in. For us, the direction of this process was reversed. We initially became acquainted through the exchange of our thoughts and convictions. Since then we have slowly built up a context around the person that we initially knew only from the thoughts, ideas and emotions the person expressed in writing. This contextualization has been conducted by exchanging information about our selves and our social surroundings by sending pictures, sound files, and even video clips of ourselves and other people close to us. Simply put, the process of becoming friends was directed from the inside, out.

In online communication, there are no presumptions, there are no ostensible indications of another’s composition, there are no outward appearances by which to judge or be judged. There is only what may come across in our words – our thoughts, beliefs, intellect, humor, mental capacity and ability. Ultimately, we are valued in terms of substance, then appearance; traditionally, these terms are reversed. In some ways this could be seen as a detraction of online communication, however, we feel that it can be a very positive aspect. By meeting someone in true anonymity we are not subject to presuppositions that may

cloud our judgment or mislead us. Instead, we are presented with only the material, which makes that person who they are.

4 How to Use a Virtual Body Socially

One of the main advantages of virtual worlds over other means of online communication such as email, IRC, or newsgroups, is the graphical interface. Just as we tend to assess people we meet FtF by their physical characteristics, we also have this ability for initial reaction to perception of visual input in virtual worlds through the use of avatars.

Often times it may be found by those who interact in virtual worlds that avatars can afford them a relatively more full means of communication, complete with body language. Avatar body language is of course very different from, and much more limited, than its physical counterpart, but it still serves much the same purpose – to say what words can not or will not say. If pictures are worth 1k words, avatars are worth a Mb.

Interacting in AW with the *Deep Cyberspace* '98 group was the first taste of online chat beyond IRC, BBS's, and other such forms of text-based chat for Vicki, and the first time Mike put his virtual foot in a 3D virtual world. Although there is a scrolling text box for sending messages at the bottom of the AW client interface, having a virtually physical body brings online communication to a whole new level – and one step closer to FtF interaction. Each AW world has its own set of avatars for users to chose from, usually reflecting the theme of that particular world. Some avatars are rather simple, having only the basic function of moving from place to place, while others are more complex and come programmed with various action sequences such as waving hello, karate kicking, or dancing the Macarena. While the avatars can not interact physically with each other – a karate kick, for instance, would go right through without affecting another avatar – their antics are visible to other users and are a method of demonstrating thoughts or emotions which are not otherwise easily conveyed through other venues of online communication. This can sometimes contribute substantially to the 'real' or 'genuine' sensation accompanied by net friendships.

Once we became comfortable in AW, and with the client software used to navigate the various worlds, we began to explore its other augmentations to the online experience. Following another avatar through a world is not, as we have found, an easily accomplished feat, regardless of the proficiency of the user. Thus, we found the 'join' command, which allows users to immediately transport their avatar to within close proximity of the person whom they are joining, to be indispensable. We found ourselves using it often, employing the command to re-locate the other whenever we felt virtually lost in the bandwidth. To perform a 'join' is in one sense a very technical activity. It's like using other avatars as things to strap your imaginary lasso around in order to pull yourself to the location to which you want to go. But that is only part of it. Since you know that the person being joined notices the event it becomes a bit personal, and it would feel awkward to repeatedly join someone that you do not know. We often stuck close to each other, joining each other from place to place not only because the other person seemed to know what was going on, but also because we found each other to be very personable and easy to talk to. This conduct was an important factor in building the bonds between us.

Identities in Action!

Another function that we made extensive use of was the ‘telegram’. If you wish to say something to only one person where several avatars are gathered, you can type your message in a telegram instead of into the ordinary chat box, and send the telegram directly to the intended recipient. This way we often kept up two distinct levels of dialogue. On the surface we were participating in the ongoing conversation of the group, but beneath that we also had an animated private dialogue between each other. Below follows an extract from the chat log of a building meeting in *ACCD World*:

mjson: ok, should the path start from the waterfall exit OR end at the center of island 1?
Cartman: offset in which direction?
Stan: to the right, cart
Stan: to lead to the tower
Cartman: Like that?
Stan: the path should, it seems to me, start at the waterfall, mf
Stan: oops!
Stan: mj
Mr. Hat: yes, start at waterfall
Stan: sorry
mjson: calling me mf eh?
mjson: heheheheh
Stan: my mistake!!
Cartman: Mr. hat how does first island from waterfall look now?
Mr. Hat: looks a little to the left

As you can see, one of the participants accidentally calls mjson an “mf”, which, to us net-life veterans at least, means something rather impolite. As you can see the conversation continues around us without much disruption. But at the same time mjson and comfortably numb are telegraphing each other:

Telegram to comfortably numb: Did you see that? Stan just called me a mother [bleep]er, hehe
Telegram to mjson: Yes I saw! I'm rofl!⁴

Again we see how the design of the technology can be used to create bonds between users. More specifically it allows for the creation of a feeling of togetherness by enhancing the feeling of proximity, but also by allowing the exclusion of others. In later versions of the AW client, there is no longer any need to use telegrams in order to hold private conversations. Now there is a more direct function called ‘whisper’. This new function was not to everybody’s liking when it first was introduced. Some feared that the possibility to whisper would increase the amount of “trash talk”. We will not take the issue of how to design social interaction any further here, but settle for the conclusion that the way the technology is designed will have an effect on how friendships evolve and that the technology in this respect has an impact on the social interaction, often in ways unforeseen by the designers.

5 More on avatar interaction: The Palace

At times the communication between us was quite intense. We could spend many hours together online for several days in a row. It is sometimes the case when two people become deeply immersed in a net friendship that they do not have a serious relationship in the outside world, thus leaving them plenty of free time to spend with their online friend.

⁴ Another online chat acronym – “rolling on the floor laughing”

But for us, who both have significant others, consequences for the amount of time we spent together online began to surface in our other relationships.

Although our relationship was of a very innocent nature, we both felt the fact that we never met in person helped avoid suspicions that we were more than “just friends”. But at least to Mike’s girlfriend it still seemed strange that there was someone out there with whom Mike spent a significant amount of time, but she knew very little about. His girlfriend does not enjoy chatting with other people on the net, and felt shut out more by the medium than anything else. By choosing not to be a part of the venue constituted by the virtual worlds of the Internet she found her access to her own boyfriend suddenly restricted.

The distance that we had thought would work as a shield against this kind of problem, and that one might suspect would also stop online relationships from becoming deep and meaningful, did not seem to be there. The concept of distance becomes very elusive in this context. When Vicki pops up as being online in Mike’s ICQ list, he feels closer to her than any of his colleagues in the adjacent offices at the department. No one is easier to contact, or more reliably reachable. While the physical distance between the bodies of Mike and Vicki is, in some respects, totally irrelevant, the distance between their avatars in a virtual world can be very important.

After a few weeks in AW, we moved on to another virtual world – *The Palace*. This is a 2D system where the avatars are handled differently from AW, as is environment navigation and the setup of the world itself, but their importance is undeniable. In *The Palace*, avatars are called ‘props’. Any graphical image may be imported and used as a prop, including photographs. This ability leaves much more room for self-expression and revelation through an unlimited choice as far as with what you may represent yourself, although the 2D format hinders any avatar interaction with other avatars or your surroundings. Vicki most often chose a cartoon girl for her avatar in *The Palace*, sometimes alternating with Hobbes or Winnie The Pooh.



Figure 2. Non-human avatars are popular in virtual worlds like *The Palace*, perhaps since they allow for a much broader, more varied expression of self.

Mike almost always wore a cartoon guy avatar, which he designed himself – an image which Vicki still associates with him, despite having seen several photographs of him.

Identities in Action!



Figure 3. The avatars of Vicki and Mike in *The Palace*.

Vicki would change “clothing” on occasion, but Mike usually remained clad in his familiar blue monochrome garb. For most of the avatars that resemble humans in *The Palace*, body parts are often interchangeable. When it began to feel strange – standing all the time when chatting – Vicki went to a prop room and got a pair of legs drawn sitting and gave a “sitting legs” prop to Mike so that we could talk for extended periods of time without our avatars having that uncomfortable “I’m just about to walk away and leave” look about them. There are, by the way, no sitting avatars in any of the AW worlds, which tends to give many of those worlds an eerie feel, somewhat resembling some kind of never-ending cocktail party.



Figure 4. Comfort, we discovered, was still a factor in virtual worlds, and like everything else, its need reflected the standards set in the real world.

In *The Palace*, where we placed our avatars became very important. Most often when we were chatting, we would position our avatars to “sit” right next to each other, just as we would in a FtF conversation. We would usually meet in one of the rooms of Mike’s Palace, find a comfortable (or sometimes humorous) position for our avatars, and chat away.



Figure 5. Various incarnations of Vicki’s *Palace* avatar. The ability to change clothes, styles, and positions deepens the sense of realism accompanied by virtual world interaction by replicating actions and customs associated with the physical world.

Occasionally, either of us might produce a new prop and place it on the other. Other times we would exchange gifts of wine glasses or teddy bears, or mjson would give comfortably numb a flower with a compliment. Although these were only props, only graphical images

on a computer screen, the sentiment was still present. To Vicki it felt as if he had given her a tangible red rose and she had sat it atop her monitor. By exchanging gifts, playing jokes, or changing avatars, we could virtually interact, just as we would had we been sitting in the same physical room rather than a virtual one. In fact, we probably went further. Mike would not give physical flowers to Vicki because he would not appreciate some other guy giving his girlfriend flowers. But to Vicki the flowers felt real, so believing that this act was “harmless” proved to be deceptive. This interaction not only made us perceive the other more as a real person (through having a “body” that we could see and effect or be effected by) but also made us feel as if the time we spent together was more legitimate, more real, that we were spending our time with a person that was really there.



Figure 6. Props, like avatars, allow the luxury of visual rather than verbal/textual expression affording something not offered by other means of written communication and accentuating the inherent realism.

The so called willing suspension of disbelief is definitely at play here, but our experiences indicate that it is not so much ‘willing’ as ‘automatic’. This feeling is corroborated by a large body of experiments conducted on the psychological perception of media by Reeves & Nass (1996). We both perceive our virtual body as our own body and other avatars as the actual body of that person to some extent. Just as with movies, we can close our eyes and remind ourselves that it is only images, but as soon as we engage in the interaction again we automatically go back to perceiving avatars as people. And these notions linger on after the encounters. Allow us to give some brief examples.

People who have spent extended time in AW heavily engaged in building activities often report that they find themselves trying to navigate their physical body in a manner similar to the way they move their avatar. Instead of turning when approaching a corner of a corridor, for instance, they get an impulse to continue straight ahead until they have cleared the corner and then start side-stepping into the next corridor. This would be the fastest way to do that maneuver in AW due to the rather rudimentary navigational controls, but in the physical world it just looks silly. What has happened is that the person momentarily mistakes the physical body for the avatar body. The brain has gotten used to maneuvering the avatar and tries to apply the same methods to the physical body. In a similar manner, AW users occasionally replace other people’s physical bodies with their avatars. Recently Mike met a colleague FtF for the first time after having worked together in AW for a long time. In the world they had worked together in, the avatars are birdlike creatures and when they met the colleague told Mike that he had gotten a mental image of a big red bird coming flying into the cafeteria moments before Mike arrived.

These mental lapses are only momentary, but what they tell us is that while we are inside a virtual environment, the representations of things from the physical world does to some extent actually take the place of what they represent. It is therefore reasonable to assume that we are, if not deceived, at least influenced by how things appear.

6 Some conclusions

Initially, what was regarded as “Internet culture” was merely a microcosm, something that reflected real world culture. But as the Internet becomes more mainstream, and its popularity grows, more people contribute to the ever-broadening culture. It has developed into an entity of its own, complete with its own set of social norms, etiquette, and behavioral protocol specific to the constraints and allowances of the medium, including interrelations between people. Meeting people online has become remarkably simple, and staying in touch or continuing a relationship with online friends, equally so. We have personally even found that the use of Internet has almost become a prerequisite for keeping contact with people living in other cities. A friend that moves and has no email address is so much more easily lost. Consequently, a new breed of relationship – the net friendship – has become an integral part of the lives of many online users. Founded in the electronic medium and emerging out of the online culture, net friendships have a particular set of weaknesses and problems. But they also have their own unique qualities, above and beyond what is traditionally considered a relationship.

To summarize, here are our main points:

- Some personal traits are emphasized in virtual contexts and some are de-emphasized. But on the whole, the way a person is perceived is very different compared to meeting FtF.
- By restricting interaction to the exchange of ideas, without the burden of exposing ones physical characteristics opens for a more direct style of interaction.
- The virtual body is of importance for the perceived engagement of the virtual world experience and as a conveyor of emotions. It even mentally takes the place of the physical body.
- The way the technology is designed affects the form of the social interaction, but often in ways not predicted by the designer.
- The technology worked as a shield, but not between Vicki and Mike, but between Mike and his girlfriend.
- When we import props from the real world such as bodies and object, we also import meaning attached to them.

Throughout the presentation we have been swinging back and forth in our depiction of a net friendship. On one hand we are bodiless, but on the other hand we acquire a new body; we are totally anonymous, but we acquire a new identity; aspects of the outside world lose their importance, but still we feel a need to learn about the other person’s physical context. We believe that it is in the appreciation of this situation, in realizing that there are no fixed answers, that ordinary life and net-life is unavoidably intertwined, a deeper understanding of net friendship resides.

To conclude we would like to offer both a promise and a warning to the reader. We promise that people who hope to use the net for real meaningful social interaction may indeed be able to find what they are looking for. But people who wish to use the net for detached and non-committal adventures that they think will be of no consequences for their existence in the ordinary world are hereby warned. Net friendships are for real.

References

- Donath, Judy (1996): *Inhabiting the Virtual City: The design of social environments for electronic communities*. Ph.D. Dissertation, MIT.
- Goffman, Erving (1959): *The Presentation of self in everyday life*. New York, NY: Doubleday.
- Jakobsson, Mikael (1999): Why Bill was killed - understanding social interaction in virtual worlds. In Nijholt, A. et al. (eds.). *Interactions in virtual worlds. Proceedings of the fifteenth Twente workshop on language technology*. Enschede, The Netherlands: Twente University.
- Reeves Byron & C. Nass (1996): *The Media Equation. How People Treat Computers, Television, and New Media Like Real People and Places*. Stanford, CA: Cambridge University Press.
- Schiano, Diane J. & Sean White (1998): 'The First Noble Truth of CyberSpace: People are people (even when they MOO)'. In *Proceedings of CHI 98*, Los Angeles, CA.
- Turkle, Sherry (1995): *Life on the Screen: Identity in the age of the Internet*. New York, NY: Simon & Schuster.